



Parotid Nodal Metastasis from HPV-mediated Oropharyngeal Squamous Cell Carcinoma

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INTRODUCTION

Human papilloma virus (HPV)-associated oropharyngeal squamous cell carcinoma (OPSCC) has a different molecular signature and confers a more favorable prognosis than HPV-negative OPSCC. However, atypical spread of HPV+ OPSCC is increasingly being reported with possible clinical implications. We encountered three cases of HPV+ OPSCC with intraparotid nodal metastasis, which has yet to be extensively described in the literature.

FIGURES

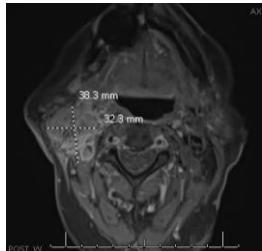


Figure 1. MRI revealed infiltrative heterogeneously enhancing lesion within the tail of the parotid measures 6.1 x 3.8 x 3.2 cm



Figure 2. PET/CT prior to adjuvant XRT revealed mild asymmetric uptake in right tonsillar region

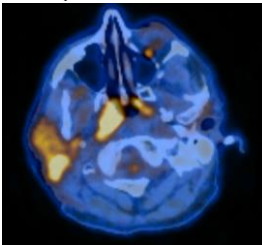


Figure 3. Hypermetabolic soft tissue nodule within posterior right parotid, concerning for metastasis

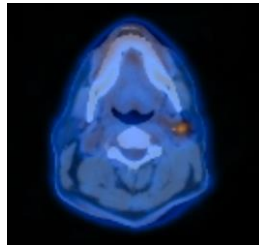


Figure 4. Left parotid metastasis 14 months after radical tonsillectomy and neck dissection

CASE PRESENTATIONS

- 82-year-old female with an invasive right parotid mass. Following parotidectomy and neck dissection, immunohistochemistry demonstrated p16 and HPV positivity. Post-operative positron emission tomography (PET) scan identified primary disease of the base of tongue.
 - 65-year-old male with known history of HPV+ OPSCC treated with chemoradiation presented with new-onset cervical lymphadenopathy. PET scan and pathology following salvage neck dissection revealed recurrent, metastatic HPV-mediated disease to the parotid lymph nodes.
 - 47-year-old male with a history of HPV+ OPSCC of the left tonsil treated with radical tonsillectomy and neck dissection presented with a new submandibular mass. Subsequent biopsy and imaging confirmed recurrent disease with metastasis to the parotid gland.
- All three patients developed distant metastatic disease. Two patients are alive with disease on immunotherapy, and one patient died of his disease.

DISCUSSION

- Synchronous multifocal HPV-related neoplasms as well as atypical pattern of distant metastasis
- Rare reports of OPSCC spread to parotid, but none focused on HPV+ OPSCC
- First case highlights primary presentation of HPV+ OPSCC as a parotid mass compared to the last two cases, which describe parotid metastasis following initial treatment
- All three patients should theoretically be low risk given HPV-related disease and absence of smoking histories
- Parotid nodal metastasis may be predictive of aggressive regional recurrence and/or progression
- Further investigation will elucidate molecular heterogeneity accounting for unusually aggressive variants of HPV-related disease

CONCLUSIONS

Although rare, atypical spread to the parotid nodes can occur in HPV-mediated OPSCC, which may be a predictor of aggressive disease.

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